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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BERNATZ, KEVIN M

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/746,056

Applicant(s)

LEHTONEN, JARMO

Examiner

Kevin M Bernatz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Amendments to claims 1 - 45, filed on March 17, 2003, have been entered in the above-identified application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Specification***

3. Applicants should remove the term "Figure 4" from their abstract since it appears to have been accidentally included.

### ***Claim Rejections - 35 USC § 112***

4. Claims 1, 15, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "film-like" renders the claim(s) indefinite because the addition of the word "like" to an otherwise definite expression extends the scope of the expression so as to render it indefinite. I.e. one of ordinary skill could not readily ascertain the full scope of the claim since it is unclear what applicant is attempting to cover by the addition of the word "like".

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The term "small" in claim 15 is a relative term which renders the claim indefinite. The term "small" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For purposes of evaluating the prior art, the Examiner has interpreted "small" to mean of a size such that the naked eye cannot readily ascertain the information conveyed by the identifier.

Claims 19 and 20 recites the limitation "spot". There is insufficient antecedent basis for this limitation in the claim (i.e. applicants' have amended the limitation "spot" to be "area" in claim 17.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 – 3, 11 – 15, 17 – 29, 31 – 37 and 41 – 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Curiel (U.S. Patent No. 5,913,543).

Regarding claims 1, 17 and 41 - 44, Curiel discloses a method for forming an optical coating film on the surface of an object comprising forming on a first area on the object surface a first optical coating (*Figure 5, area 146 and col. 9, lines 1 – 22*), which

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creates a first interference effect at a predetermined wavelength of visible light (col. 9, lines 1 – 22: *wherein it is disclosed that area 146 displays a pattern that is invisible to the naked eye*), and forming on a second area of said surface, a second interference effect at said wavelength of visible light (*Figure 5, any area other than area 146, such as area 41 or uncoated outer areas*), said second interference effect being different from said first interference effect, wherein one of said effects being visible to the naked eye and the other of said effects being invisible to the naked eye (*i.e. any of the visible reflected patterns, such as the text printing, is an interference effect that is different than the reflected patterns of area 146, which are invisible to the naked eye due to their size*).

The limitation(s) “creating an interference phenomenon” (claim 1) and “for making an identifier on a surface of an object” are (an) intended use limitation(s) and are not further limiting in so far as the structure of the product is concerned. “[I]n apparatus, article, and composition claims, intended use must result in a **structural difference** between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. ***If the prior art structure is capable of performing the intended use, then it meets the claim.*** In a claim drawn to a process of making, ***the intended use must result in a manipulative difference*** as compared to the prior art.” [emphasis added] *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963). See MPEP § 2111.02.

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Regarding claims 2, 3, 18 and 19, Curiel discloses second areas meeting applicant's claimed limitations (*Figure 5, uncoated areas or the coated hologram, area 41*).

Regarding claims 11 – 13, 21, 22, 25 – 29, and 31 - 37, the limitation(s) in these claims are (an) intended use limitation(s) and are not further limiting in so far as the structure of the product is concerned for the reasons cited above. The Examiner notes the Curiel disclose many comparable/overlapping uses of the object and/or identifiers (*Figures, col. 1, lines 16 – 21, 30 – 36, and 39 – 40, col. 3, lines 14 – 16; and col. 5, lines 28 – 39*). It is deemed that the disclosed invention would have been capable of being used in/as the claimed limitations, thereby meeting the intended use claims.

Regarding claims 14 and 15, Curiel discloses identifiers meeting applicants' claimed limitations (*Figure 5 and col. 9, lines 1 – 22*).

Regarding claim 20, Curiel disclose multiple coating layers in the area designated by the numbers "07" in Figure 5 and by the numbers "96" in Figure 5 (*col. 7, lines 50 – 64 and the Examiner notes that the text is a "coating layer" applied over the underlying coating layers shown in Figure 5*).

Regarding claims 23 and 24, Curiel disclose coatings comprising both metal compounds and non-metallic compounds (*col. 8, lines 5 – 6 and col. 9, lines 8 – 11*).

***Claim Rejections - 35 USC § 103***

7. Claims 4 – 6 and 8 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curiel as applied above, and further in view of Prince et al. ('759) and Dobrowolski ('770 A2).

Curiel is relied upon as described above.

Curiel fails to disclose the claimed coating methods.

However, the claimed coating methods are all known coating methods for applying diverse coatings to surfaces (see *Dobrowolski*, page 18, line 32 bridging page 19, line 1 and *Prince et al.*, Title and col. 2, lines 53 – 64). The Examiner deems that the determination of an appropriate coating/deposition technique would be within the knowledge of one of ordinary skill, depending on the type of coating to be applied, the cost of the coating method and the production facilities available.

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Curiel to utilize a deposition/coating technique known in the art to one of ordinary skill, depending on the type of coating to be applied, cost and production facilities available.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Curiel as applied above.

Curiel is relied upon as described above.

Curiel fails to explicitly disclose adding tinting meeting applicant's claimed limitations.

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However, Curiel teaches coating documents and printing on said documents (*Figure 5*) and using colored (i.e. tinted) inks is deemed a matter of obvious design choice, depending on the desired aesthetics of the finished product.

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Curiel to utilize a tinting meeting applicant's claimed limitations, since it is an obvious matter of design choice within the knowledge of one of ordinary skill in the art.

9. Claims 16 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curiel as applied above, and further in view of Pennace (U.S. Patent No. 5,296,949).

Curiel is relied upon as described above.

Curiel fails to disclose the invisible identifier as being detected by photon radiation.

However, the Examiner deems that invisible identifier used by Curiel (invisible due to small size) and invisible identifiers readable by photon radiation are known equivalents in the field of security markings for documents, as evidenced by Pennace, which teaches that using security markers visible only to infrared or ultraviolet light (i.e. "photon radiation") are known in the art (*col. 1, lines 20 – 28*).

Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, security identifiers that are invisible due to their extremely small size and security identifiers that are invisible except under



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photon radiation are equivalents in the field of optically invisible security identifiers. *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant(s) invention to modify the device of Curiel to use an invisible identifier meeting applicant's claimed limitations, since substitution of known equivalents is within the capability of one of ordinary skill in the art.

10. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Curiel as applied above, and further in view of Antes et al. (U.S. Patent No. 4,984,824).

Curiel is relied upon as described above.

Curiel fails to disclose a coating thickness meeting applicant's claimed limitations.

However, the Examiner deems that it would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such as the coating thickness through routine experimentation, especially given the teachings in Antes et al. regarding appropriate thickness values for visible and invisible coatings (*col. 2, lines 19 – 40 and lines 64 – 65; col. 3, lines 49 – 51; and col. 4, lines 6 – 14 and lines 54 - 57*). *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant(s) invention to modify the device of Curiel to use a coating thickness

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meeting applicant(s) claimed limitations, since the optimization of a known cause-effective variable is within the capabilities of one having ordinary skill in the art.

11. Claims 38 – 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curiel as applied above, and further in view of the state of the prior art, as evidenced by Lasch et al. (U.S. Patent App. No. 2002/0145049 A1).

Curiel is relied upon as described above.

Curiel fails to disclose using luminous material meeting applicants' claimed limitations.

However, Curiel teaches coating documents and printing on said documents (*Figure 5*) and using luminous inks/materials is deemed a matter of obvious design choice known to one of ordinary skill in the art (see *Lasch et al.*, *Paragraphs 0038 and 0045*), depending on the desired aesthetics of the finished product.

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Curiel to utilize a luminous material meeting applicant's claimed limitations, since it is an obvious matter of design choice within the knowledge of one of ordinary skill in the art.

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***Response to Arguments***

**12. The rejection of claims 1 - 40 under 35 U.S.C § 102/103 – Dobrowolski, alone or in combination with various references**

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

The above noted rejection has been withdrawn because applicant(s) amendment(s) have set forth new limitations (e.g. "one of said effects being visible to the naked eye and the other of said effects being invisible to the naked eye") no longer anticipated, nor rendered obvious, by the above noted rejection.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Applicant's amendment resulted in embodiments not previously considered (i.e. "one of said effects being visible to the naked eye and the other of said effects being invisible to the naked eye") which necessitated the new grounds of rejection, and hence the finality of this action.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (703) 308-1737. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



KMB  
June 11, 2003



Paul Thibodeau  
Supervisory Patent Examiner  
Technology Center